

is not limited to the disclosed embodiment but is intended to cover various arrangements included within the spirit and scope of the broadest interpretations and equivalent arrangements.

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## Claims

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We claim:

1. A showerhead device comprising a novel function, douche mode, for women's personal hygiene through providing an engagement means around a spray nozzle nestled in the face plate of a hand-held or wall-mounted showerhead to allow a secret built-in coupling structure for thread-fit or snap-fit attachment to a disposable vaginal douche nozzle or a flexible douche hose attachable to a disposable vaginal douche nozzle, so that user can access the douche mode of a showerhead by selecting the spray mode of said spray nozzle where it has a coupling structure attachable to said douche nozzle or said flexible douche hose. Said douche nozzle or hose receives water from said spray nozzle when the douche mode on a showerhead is selected and said douche nozzle or hose from this invention is attached. The spray pattern of said spray nozzle is not affected when said douche nozzle or hose is not attached. Said douche mode is thereby built into a showerhead with a simple modification of current showerhead art without any significant change on common appearance of a showerhead face.

2. A showerhead as in claim1, wherein one form of said engagement means in this invention comprises

a dam-shape spray nozzle nestled in a showerhead face plate;

an annular recessed internally threaded cylindrical wall around said dam-shape spray nozzle;

an annular clearance space between said dam-shape spray nozzle and said annular recessed internally threaded cylindrical wall to allow a douche nozzle or

a douche hose with an externally threaded joint end cooperatively attachable to said threaded cylindrical wall, so that said douche nozzle or douche hose receives water from said dam-shape spray nozzle when said douche mode is selected and said douche nozzle or hose is attached, and that the spray pattern of said dam-shape spray nozzle is not affected when said douche nozzle or hose is not attached to the showerhead.

3. A showerhead as in claim1, wherein another form of said engagement means in this invention comprises

an externally threaded barrel-shape spray nozzle nestled in a showerhead face plate;

an annular recessed smooth cylindrical wall around said externally threaded barrel-shape spray nozzle;

an annular clearance space between said externally threaded barrel-shape spray nozzle and said annular recessed smooth cylindrical wall to allow a douche nozzle or a douche hose with an internally threaded joint end cooperatively attachable to said externally threaded barrel-shape spray nozzle, so that said douche nozzle or douche hose receives water from said barrel-shape spray nozzle when said douche mode is selected and said douche nozzle or hose is attached, and that the spray pattern of said barrel-shape spray nozzle is not affected when said douche nozzle or hose is not attached to the showerhead.

4. A showerhead as in claim1, wherein still another form of said engagement means in this invention comprises

a dam-shape spray nozzle nestled in a showerhead face plate;

an annular recessed cylindrical wall around said dam-shape spray nozzle;

a floating O-ring that is captivated in the bore of said annular recessed cylindrical wall by a retaining sleeve that defines a recess;

a douche nozzle or a flexible douche hose with an annular external groove formed around a joint end that can be secured with a snap-fit in the annular recessed cylindrical wall by said floating O-ring;

an annular clearance space between said dam-shape spray nozzle and said annular recessed cylindrical wall with a captivated floating O-ring to allow a douche nozzle or a douche hose with an annular external groove formed around a joint end cooperatively attachable to said floating O-ring,

said snap-fit feature which is effected by said groove formed around the joint end of a douche nozzle or a flexible douche hose, so that said douche nozzle or douche hose receives water from said dam-shape spray nozzle when said douche mode is selected and said douche nozzle or hose is attached, and that the spray pattern of said spray nozzle is not affected when said douche nozzle or hose is not attached to the showerhead.

5. A disposable vaginal douche nozzle as in claim 1, wherein said douche nozzle comprises

a joint end, a hollow tubular lower body, a fixed or flexible obtuse angle, and a hollow tubular upper body made of any suitable disposable material such as plastic or the like;

said joint end that has at least three forms of coupling means as described respectively in claims 2, 3 and 4: externally threaded configuration, internally threaded configuration, or annular external groove configuration;

a fixed or flexible obtuse angle between the douche nozzle lower body and douche nozzle upper body; wherein said flexible angle has spiral and bendable structure that can be made of any suitable material, such as plastic or the like;

four recessed spaced-apart grooves extending longitudinally on the exterior surface of the douche nozzle upper body;

four ridges with four spaced-apart hemispherical bumps along longitudinal axis of each ridge between said recessed spaced-apart grooves on the exterior surface of the douche nozzle upper body;

a plurality of apertures nestled within said four recessed spaced-apart grooves on the douche nozzle upper body;

said apertures constructed in diagonally-downward cone-shape having its reduced end towards the hollow fluid passageway and its enlarged end open to the exterior surface of the douche nozzle upper body;

said douche nozzle lower body that has smooth exterior surface and basically serves as a connecting tunnel between the joint end and the douche nozzle upper body.

6. A flexible douche hose as in claim 1, wherein said douche hose comprises

a first end, a flexible hose, and a second end made of any suitable material;

said first end that is attachable to a showerhead as in claim 1 has at least three forms of coupling means as described respectively in claims 2, 3 and 4:

externally threaded configuration, internally threaded configuration, or annular external groove configuration;

said second end that connects with a douche nozzle as in claim 5 by thread-fit or snap-fit attachment wherein a joint end of said douche nozzle has cooperatively coupling means for a quick connection.